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(54) Title: RULE CREATION FOR COMPUTER APPLICATION SCREENING; APPLICATION ERROR TESTING

#### Rule Template for Telephone Numbers

if data element of field matches any of the following formats consider it contains a telephone number of that format:

a. North American telephone number format:  
area code of:  
optional (3 digits closing) or - or <tab> or <space>  
local no. of:  
3 digits optional - or <tab> or <space>  
4 digits

b. international telephone number format:  
country code of:  
optional (2 or 3 digits closing) or - or <tab> or <space>  
city code of:  
optional (1 to 3 digits closing) or - or <tab> or <space>  
local number of:  
4 to 8 digits, optionally with one or more interspersed - or <tab> or <space>

c. toll free telephone number format  
1 optional (or <tab> or <space>  
800 or 855 or 866 or 877 or 888  
closing) or - or <tab> or <space>  
3 digits optional - or <tab> or <space>  
4 digits

(57) Abstract: To facilitate the creation of rules for screening application layer requests to a computer application, a sample space of application layer requests is grouped according to one or more grouping criteria. Each grouping criterion may be a feature of application layer requests such that each grouping contains application layer requests with a common feature. For example, when the application layer requests follow the hyper-text transfer protocol (HTTP), a common feature for some groupings could be a common URI pathname extension. A rule set for an application may be used to expose errors in the application. Test requests are constructed each of which violates at least one of the rules. The test requests are passed to the application to see whether the application throws the expected exceptions.